

IN THE SPECIFICATION

Title:

-- [Kinetically Controlled Solder Bonding] **Kinetically Controlled Solder** --

Claim 17:

17. A solder useful in kinetically controlled bonding of parts, the solder comprising:

a plurality of chemical element layers;

at least one of the chemical element layers defining a binary solder [for application to a first part], the binary solder having a first melting temperature; and

another one of the chemical element layers defining a solder quenching layer [for application to a second part];

wherein the solder formed by the chemical element layers has a usage temperature which is substantially higher than the first temperature of the binary solder.

Claim 18:

18. The solder according to claim 17, wherein the binary solder comprises a sequence of chemical element layers each comprising a single chemical element of the binary solder, the chemical element layers forming a binary mixture close to the eutectic point of the chemical elements [when melted] at the first melting temperature.

Claim 19:

19. The solder according to claim 18, wherein the chemical element layers are gold and tin which form a binary solder mixture close to the eutectic point of gold-tin [when melted] at the first melting temperature.